

REMARKS/ARGUMENTS

Claims 11, 12, 14, 15, 17 and 18 are pending in the application. Claims 11, 12, 17 and 18 have been amended. Claims 13 and 16 have been cancelled.

The rejection of claims 11, 12, 15 and 16 under 35 U.S.C. 102(b) as being anticipated by the newly cited Frankeny (US 5,509,200) is respectfully traversed. In the first place, Frankeny says nothing about his printed circuitboard being thermally enhanced. Moreover, the claims have been amended to specify that: "wherein one of said nonconductive laminate sheets has a glass fiber ingredient which allows for structural enhancement against thermal expansion coefficient mismatch between said metal core and said one of said nonconductive laminate sheets." No such teaching or suggestion is found in the reference. Frankeny states:

The patterned sheet of CIC (core sheet 1) is then coated on both sides with a relatively thick dielectric 6 of a photoimagable polymer, such as epoxy or polyimide as shown in Fig. 3 (col. 3, lines 29-33).

Thus, there is no teaching or suggestion in this reference of a thermally enhanced printed circuitboard as defined in claims 11, 12 and 15.

The rejection of claims 11, 12 and 15 under 35 U.S.C. 102(b) as being anticipated by newly cited DiStefano (US 5,640,761) is respectfully traversed. The claims have been amended to recite that the nonconductive laminate sheets have a glass fiber ingredient which allows for structural enhancement against thermal expansion coefficient mismatch between said metal core and said one

of said nonconductive laminate sheets. Moreover, in keeping with this concept, the metal core is recited as having a thickness in the range of 5 to 15 mils and that the rigidifying laminates have a thickness within a range of 1.5 to 3 mils. No such combination is taught or suggested by DiStefano. DiStefano teaches that a conductive ground plane or conductive layer is applied to the thermoplastic laminate which is less than about 250 micrometers (a micrometer (or micron) is a common metric unit of measurement equal to about 0.039370 mil) thick, and preferably less than about 150 micrometers thick and is applied by conventional plating or other deposition processes or less and may be provided as a separate self-supporting layer and laminated with sheet 500 by juxtaposing the two layers under heat and pressure, as in a nip-type or platen-type laminating press." (See first paragraph under Detailed Description -- Preferred Embodiment of the Present Invention.)

Thus, the DiStefano reference does not teach the basic construction recited in the claims of a conductive metal core having a thickness range of 5 to 15 mils and first and second fiberglass laminates having thickness in the range of 1.5 - 3 mils, to result in a thermally enhanced printed circuit wiring board.

The rejection of claims 14 and 17 under 35 U.S.C. 103(a) as being unpatentable over DiStefano in view of Van Loan (US 5,247,246) is respectfully traversed.

Claim 13 has been cancelled and the subject matter thereof combined with parent claim 11. Claim 14 has been amended to depend

from claim 11 and specifies one or more additional nonconductive and conductive layers thereon, and is patentable for the same reason that its parent claim is patentable.

Claim 17, which has been amended to include the thickness limitations of the nonconductive laminate sheets, is patentable for the reason given above.

The asserted motivation for combining Van Loan with DiStefano, namely, "The motivation for doing so would have been to provide a layer of copper with a thickness sufficient for electrical conduction yet thin enough to not adversely effect the overall height of the device," is a conjured up motivation. None of the motivations asserted by the Examiner deal with making the applicants' thermally enhanced printed circuitboard.

Claim 18 was rejected under 35 U.S.C. 103(a) as being unpatentable over DiStefano in view of Van Loan and Frankeney, and this ground of rejection is respectfully traversed. DiStefano, Van Loan and Frankeney have been discussed individually above. The Examiner's selection from DiStefano, Van Loan and Frankeney have not been dictated by what flows naturally from these references but by what flows naturally from reading applicants' claims. It is a clear case of hindsight reconstruction in the art.

In view of the above, further and favorable reconsideration is respectfully requested.

Respectfully submitted,

Jen Zegeer

Jim Zegeer, Reg. No. 18,957
Attorney for Applicants

Suite 108
801 North Pitt Street
Alexandria, VA 22314
Telephone: 703-684-8333

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In the event this paper is deemed not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 26-0090 along with any other additional fees which may be required with respect to this paper.